IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Jennifer Chayes *et al.*   Examiner: Jay A. Morrison

Serial No: 10/603,034   Art Unit: 2168

Filing Date: June 24, 2003

Title: NEWS GROUP CLUSTERING BASED ON CROSS-POST GRAPH

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY TO INTERVIEW SUMMARY DATED OCTOBER 17, 2006

Dear Sir:

The following is a summary of the substance of the telephonic interview between
applicants' representative and Examiner with regards to this case.

<u>**SUBSTANCE OF INTERVIEW**</u>

Applicants' representative asked the Examiner to reconsider his rejection of claims 1-42 based substantially on the arguments presented below which were included in the Reply to the Final Office action dated July 18, 2006. The Examiner suggested that an appeal might be required to resolve the disparity between the applicants' representative's and the Examiner's interpretation of the cited references or that further limiting the claims from the dependent claims or specification may overcome the rejection, but would require further searching the field of prior art.

II.   Rejection of Claims 1-42 Under 35 U.S.C. §103(a)

Claims 1-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ding ("Analysis of gene expression profiles: class discovery and leaf ordering", RECOMB 2002, April 2002), in view of Uomini (US 5,819,269). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Ding and Uomini, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicants' disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The subject invention relates to organizing newsgroups into clusters based upon cross posts between newsgroups. A weighted graph is constructed with newsgroups as the vertices and cross-posts as the edges to facilitate analysis of the degree to which newsgroups are related. In particular, independent claim 1 (and similarly independent claims 21, 30 and 40-42) recites *an*

*engine that constructs a weighted graph with a subset of the **newsgroups represented as vertices of the graph, and cross-postings relating to the subset of newsgroups represented as edges**.*

Ding and Uomini do not teach or suggest the aforementioned claimed features of applicants' invention and also provide no motivation to be combined. To the extent Ding relates in any manner to applicants' claimed invention, it merely teaches clustering of data – there is no teaching or suggestion that the vertices of a weighted graph are newsgroups and that the edges are cross posts between the newsgroups as in the claimed invention. Ding is concerned with clustering data related to tissue sample and gene responses to understand what role genes play in diseases. The prior art reference states, "We briefly introduce the min-max cut graph partition and clustering method very recently developed for internet newsgroup clustering" which is the single reference to internet newsgroup clustering in the cited art. Ding goes on to describe the min-max cut algorithm in generic terms. Ding provides no details as to how this clustering method is used with regard to Internet newsgroup clustering and specifically fails to disclose what the vertices and edges are in the weighted graph. As stated above, Ding is concerned with how this method might be used for tissue sample data clustering.

Moreover, Uomini discloses a method for posting messages to newsgroups and including category and sub-category fields in the header of the post to allow for categorization of posts beyond the basic newsgroup categories provided by newsgroup management entities. This allows users of the system to effectively create new newsgroups without having to engage in the long processes established by the newsgroup management entities for creating a new newsgroup. The cited art makes a brief mention of cross-posting to multiple newsgroups, though, only with respect to stating that it is possible to do so when posting a message. Uomini is silent regarding newsgroup clustering and weighted graphs, and thus does not makeup for the deficiencies of Ding with regard to teaching that the vertices of a weighted graph are newsgroups and that the edges are cross posts between the newsgroups.

Furthermore, Ding is concerned with clustering of tissue samples and Uomini is concerned with categorization of newsgroup postings. The references are not analogous, and provide no motivation to be combined as suggested. However, *assuming arguendo* that the references could be combined, they still fail to teach or suggest that newsgroups are represented as vertices of a weighted graph, and cross-postings relating to the newsgroups are represented as edges. The Office Action, Response to Arguments section asserts that since Ding makes a

reference to Internet newsgroups along with weighted graphs and Uomini makes a reference to cross-postings that it would have been obvious to create a weighted graph with newsgroups as the vertices and cross-postings as the edges. However, as discussed above, Ding only makes a casual reference to Internet newsgroups and does not provide any disclosure as to how they are used in relation to a weighted graph. Moreover, Uomini only makes a casual reference to cross-postings in newsgroups without any discussion of weighted graphs. Both Ding and Uomini are silent regarding clustering of newsgroups. Therefore, the combination of Ding and Uomini do not make any suggestion that a weighted graph would have newsgroups as vertices and cross-postings related to the newsgroups as edges.

In view of the foregoing, applicants' representative respectfully submits that Ding and Uomini, alone or in combination, fail to teach or suggest all limitations of applicants' invention as recited in independent claims 1, 21, 30 and 40-42 (and claims 2-20, 22-29 and 31-39 that depend there from), and thus fails to make obvious the subject claimed invention. Accordingly, this rejection should be withdrawn.

III.   Rejection of Claims 35 and 38 Under 35 U.S.C. §103(a)

Claims 35 and 38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ding ("Analysis of gene expression profiles: class discovery and leaf ordering", RECOMB 2002, April 2002), in view of Uomini (US Patent 5,819,269), and further in view of Gage *et al.* (US Patent 5,923,846). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Ding, Uomini and Gage *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention.

Claims 35 and 38 depend from independent claim 30. As noted *supra*, Ding and Uomini do not teach or suggest each and every element of the subject invention as recited in independent claim 30 and Gage *et al.* fails to make up for the deficiencies of Ding and Uomini with regard to this independent claim. Gage *et al.* discloses a method of uploading and downloading files from a bulletin board that are represented as objects within messages. The cited art is silent regarding newsgroup clustering and weighted graphs. Therefore, Ding, Uomini, and Gage *et al.*, alone or in combination, fail to teach or suggest that newsgroups are represented as vertices of a weighted graph, and cross-postings relating to the newsgroups are represented as edges. For at least this reason, this rejection should be withdrawn.

CONCLUSION

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP467US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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